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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 95-068

WASTE DISCHARGE REQUIREMENTS
FOR
COUNTY OF SAN JOAQUIN
NORTH COUNTY RECYCLING CENTER AND SANITARY LANDFILL
CLASS III LANDFILL
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board), finds that:

1. The San Joaquin County Department of Public Works (hereafter Discharger) owns and operates the North County Sanitary Landfill. The facility was previously regulated by Waste Discharge Requirements Order No. 94-260 in conformance with Title 23, California Code of Regulations (CCR), Division 3, Chapter 15 (hereafter Chapter 15).

2. The 320-acre facility, Assessor Parcels No. 065-120-02, -03, -08, -09, is owned and operated by the San Joaquin County Department of Public Works. The facility is 9 miles east of Lodi and 12 miles northeast of Stockton, in Section 21, T3N, R8E, MDB&M, as shown in Attachments A and B, which are incorporated herein and made part of this Order.

3. The waste management facility consists of a single landfill containing 11 modules, each constructed on an as-needed basis. Waste disposal activities have occurred within the current fill modules 1 and 2,as shown on Attachment B, which are part of the 185.4 acres proposed for landfill use.

4. On 8 December 1994, the Discharger proposed an engineered alternative to the prescriptive liner requirements of RCRA, Subtitle D. The proposed engineered alternative substitutes a geosynthetic clay liner (GCL) for two feet of clay. Both the engineered alternative and the prescriptive requirement include a 60 mil HDPE component in the base liner. The proposal to substitute a GCL included a demonstration that the permeability of the proposed liner system will result in a lower leakage rate than the prescriptive requirement. The Discharger also proposes to construct an 80 mil HDPE sidewall liner in place of the prescriptive liner requirement. The 80 mil HDPE liner will be manufactured with special features to improve construction quality assurance and prevent leaks. These waste discharge requirements approve the proposed engineered alternative.

WASTES AND THEIR CLASSIFICATION

5. The Discharger proposes to discharge wastes classified under Chapter 15 as 'non-hazardous solid waste' and 'inert waste'. The site serves the franchised collectors for the City of Lodi and the County Refuse Service Area B, as well as the general public and the commercial haulers servicing the northern part of San Joaquin County.

DESCRIPTION OF SITE

6. Land within 1,000 feet of the site is primarily agricultural, residential and livestock grazing.

7. The soils immediately underlying the landfill are typical of those found in the San Joaquin Valley. The surface soils consist of 2 to 3 feet of a sandy loam underlain by approximately 0.5 feet of cemented hardpan. The next 100 feet consist of consolidated interbedded sands, silts and clays with individual layers 1.5 to 5 feet thick.

8. The ground water flows in a generally southwest direction beneath the site, ranging between -35 to -41 feet below mean sea level (MSL). Calculated flow velocity is about 3.7 ft/yr, with a hydraulic gradient of about 1.2×10^{-3} ft/ft.

9. The beneficial uses of ground water are municipal, domestic, agricultural and industrial supply.

10. The site receives an average of 14 inches of precipitation per year (as measured at the Stockton Disposal Site 1957 - 1991). The mean evaporation for this facility is 67.95 inches per year (as measured at Lodi, 1931 - 1979). Based on these data, average annual net evaporation at the site is about 54 inches.

11. The 100-year, 24-hour precipitation event for the site is 3.65 inches (as calculated at the Stockton Disposal Plant).

12. The site is not within the 100 year floodplain. However, the site is within Flood Zone C, which is an area subject to minimal flooding. The flooding threat will be mitigated by the construction of flood control berms. Berm construction will be done as filling proceeds from module to module and will be documented to the Board as construction proceeds.

13. Surface drainage is to South Paddy Creek, which crosses the site, and is an intermittent tributary to Bear Creek and Disappointment Slough, which flow into the San Joaquin River. South Paddy Creek was rerouted around the east side of the site, then west across the site between the landfill and the flood berms, and finally reconnected to the natural channels.

14. The beneficial uses of these surface waters are domestic, municipal, agricultural and industrial supply, ground water recharge, recreation, aesthetic enjoyment, fresh water replenishment and habitat, spawning, wildlife habitat and the preservation and enhancement of fish, wildlife and other aquatic resources.

15. No known Holocene faults underlie the site. The closest known faults are the Bear Mountain Fault Zone (28 km east) and the Melones fault zone (38 km east). The maximum probable earthquake is estimated to be 5.7, which would produce a maximum average peak horizontal ground acceleration of 0.10 g.

OPERATION OF FACILITIES

16. Refuse will be compacted in two-foot thick layers, and refuse slopes will not exceed 3:1 (horizontal:vertical). Within 24 hours, all waste will be covered with at least six inches of cover. Waste not to be covered with more refuse for greater than 180 days will be covered with an intermediate cover one-foot thick.

17. A public drop-off and recycling center is near the facility entrance. The landfill is open to the public, but they will not be allowed past the public drop-off point. The recycling center will accept most recyclable materials, including household hazardous waste.

18. A hazardous waste exclusion program has been implemented at the facility. This program consists of checking all loads received at the on-site public drop-off and recycling center. No public vehicles will be allowed to unload at the active face. Public vehicles will unload at the public drop off center and the waste will be taken to the active face by facility vehicles. County franchised and some commercial vehicles will go directly to the active face, where they will be visually inspected as they unload.

19. The active life of the facility is estimated to be 32 years, based on current disposal rates and capacities. The total capacity of this landfill is 16.2 million cubic yards. The estimated service life will change if disposal rates differ significantly than those predicted

CEQA AND OTHER CONSIDERATIONS

20. The action to revise WDRs for this facility is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Title 14, CCR, Section 15301.

21. On 9 October 1991, the United States Environmental Protection Agency (EPA) promulgated regulations (Title 40, Code of Federal Regulations, Parts 257 and 258, "federal MSW regulations" or "Subtitle D") that apply, in California, to dischargers who own or operate Class II or Class III landfill units at which municipal solid waste (MSWLF) is discharged. The majority of the federal MSW regulations became effective on the "Federal Deadline", which is 9 October 1993.

22. This Order implements:

    a. the Water Quality Control Plan for the Sacramento River, Sacramento-San Joaquin Delta and San Joaquin River Basins (5A, 5B, 5C), Second Edition;

    b. the prescriptive standards and performance goals of Chapter 15, Division 3, Title 23 of the California Code of Regulations, effective 27 November 1984, and subsequent revisions;

    c. the prescriptive standards and performance criteria of Part 258, Title 40 of the Code of Federal Regulations (Subtitle D of the Resource Conservation and Recovery Act); and

    d. State Water Resources Control Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste, adopted 17 June 1993.

PROCEDURAL REQUIREMENTS

23. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

24. The Board has notified the Discharger and interested agencies and persons of its intention to revise the waste discharge requirements for this facility.

25. In a public hearing, the Board heard and considered all comments pertaining to this facility and discharge.

IT IS HEREBY ORDERED that Order No. 94-260 is rescinded and it is further ordered that San Joaquin County and it agents, assigns and successors, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of 'hazardous waste' or 'designated waste' at this site is prohibited. For the purposes of this Order, 'hazardous waste' and 'designated waste' are as defined in Chapter 15 and described in Monitoring and Reporting Program No. 95-068.

2. Discharges of waste to either a landfill unit that has not received wastes or to a lateral expansion of a landfill unit are prohibited, unless the discharge is to an area equipped with a containment system which meets requirements in **B. Discharge Specifications**, below.

3. The discharge to landfill units of liquid or semi-solid waste (i.e., waste containing less than 50% solids), except dewatered sewage or water treatment sludge as provided in Section 2523(c) of Chapter 15, is prohibited.

4. The discharge to landfill units of solid waste containing free liquid or moisture in excess of the waste's moisture holding capacity is prohibited.

5. The discharge of containerized liquids is prohibited.

6. The discharge of fuel products or cleaning solvents to the ground or surface waters is prohibited.

7. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or to ground water is prohibited.

8. The discharge of waste to ponded water from any source is prohibited.

9. The discharge of waste within 50 feet of surface waters not related to landfill drainage structures is prohibited.

10. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which in turn:

    a. require a higher level of containment than provided by the unit;
    b. are restricted 'hazardous wastes'; or
    c. impair the integrity of containment structures

    is prohibited.

B. DISCHARGE SPECIFICATIONS

General Specifications

1. Wastes shall only be discharged into, and shall be confined to, the Waste Management Units (WMUs) specifically designed for their containment.

2. Wastes shall not be discharged below an elevation which is five feet above the highest anticipated elevation of ground water.

3. All wells within 500 feet of a waste management unit shall be sealed or abandoned to the satisfaction of the San Joaquin County Public Health Services Department prior to the discharge of waste to the unit. A record of the sealing and/or abandonment of such wells shall be sent to the Board and to the State Department of Water Resources.

4. Leachate generation by any LCRS shall not exceed 85% of the design capacity of the sump pump. If leachate generation exceeds this value or if the depth of fluid in an LCRS exceeds the minimum needed for pump operations, then the Discharger shall immediately cease the discharge of sludges and other high-moisture wastes to the landfill unit and shall notify the Board in writing within seven days. Notification shall include a timetable for remedial or corrective action necessary to reduce leachate production.

General WMU Construction

5. Clay liners and landfill caps shall have a hydraulic conductivity of 1×10^{-7} cm/s or less and a minimum relative compaction of 90%. Hydraulic conductivities of liner materials shall be determined by laboratory tests using solutions with similar properties as the fluids that will be contained. Hydraulic conductivities of cap materials shall be determined by laboratory tests using water. Hydraulic conductivities determined through laboratory methods shall be confirmed by field testing in accordance with the Standard Provisions and Reporting Requirements as described in Provision D.1. A GCL may be substituted for the clay liner beneath the landfill. The GCL must have a permeability less than 2×10^{-9} cm/sec. An 80 mil HDPE liner may be substituted for the composite sidewall liner.

6. LCRSs shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the WMU and to prevent the buildup of hydraulic head on the underlying natural geologic materials of low hydraulic conductivity. The depth of fluid in any LCRS sump shall be maintained as low as feasible and no greater than the minimum needed for safe pump operation.

Protection From Storm Events

7. Precipitation and drainage control systems shall be designed, constructed, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions.

8. Waste management units shall be designed, constructed, and operated in compliance with precipitation and flood conditions contained in the Standard Provisions and Reporting Requirements referenced in Provision D.1, below.

9. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the site and to prevent surface drainage from contacting or percolating through wastes.

Landfill Specifications

10. Municipal solid waste shall be discharged to either (a) that portion of a waste management unit which received wastes (i.e. that active portion of the waste management unit which is within the boundaries of the Existing Footprint), or (b) to an area equipped with a containment system which meets the additional requirements for both liners and leachate collection systems specified below.

11. All containment systems installed after 9 October 1993 shall either: (a) include a composite liner which consists of an upper synthetic flexible membrane component (synthetic liner or SL) and a lower component of soil. The SL shall be at least 40-mils thick (or at least 60-mils thick if high density polyethylene) and shall be installed in direct and uniform contact with the underlying compacted soil component. The lower component shall be compacted soil that is at least two feet thick and that has an hydraulic conductivity of no more than 1×10^{-7} cm/sec (this specification is referred to as the Prescriptive Design); or (b) a GCL with a hydraulic conductivity no more than 2×10^{-9} cm/sec, may be substituted for the soil component in the bottom or sidewall liner and/or an 80 mil HDPE liner may be substituted for the composite liner in the sidewalls.

12. All containment systems installed prior to 9 October 1993 where wastes have not been discharged and which will accept wastes after 9 October 1993 shall include a composite liner which features as its uppermost component a synthetic liner (SL). The SL shall be at least 40-mils thick (or at least 60-mils thick if high density polyethylene) and shall be installed in direct and uniform contact with the underlying materials. The composite liner shall meet the performance criteria contained in 40 CFR 258.40(a)(1) and (c).

13. New landfill units and lateral expansions shall not be located in wetlands unless the Discharger has successfully completed, and the Board has approved, all demonstrations required for such discharge under 40 CFR 258.12(a).

14. Landfill leachate shall be discharged by a method approved by the Board.

WMU Closure Specifications

15. At closure, WMUs shall receive a final cover consisting, at a minimum, of a two-foot thick foundation layer which may contain waste materials, overlain by a one-foot thick

clay liner, and finally by a one-foot thick vegetative soil layer, or an engineered equivalent final cover approved by the Board pursuant to Subsections 2510(b) and (c) of Chapter 15.

16. Vegetation shall be planted and maintained over each closed landfill unit. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness.

17. Closed landfill units shall be graded to at least a three percent grade and maintained to prevent ponding.

C. RECEIVING WATER LIMITATIONS

Water Quality Protection Standards

The concentrations of Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program No. 95-068, which is attached to and made part of this Order.

D. PROVISIONS

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated September 1993, which are hereby incorporated into this Order. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.

2. The Discharger shall comply with all applicable provisions of 23 CCR Chapter 15 and 40 CFR Part 258 that are not specifically referred to in this Order.

3. The Discharger shall comply with Monitoring and Reporting Program No.95-068, which is attached to and made part of this Order. This compliance includes, but is not limited to, maintenance of waste containment facilities and precipitation and drainage controls and monitoring ground water, leachate from the landfill units, the vadose zone

and surface waters, throughout the active life of the waste management units and the post-closure maintenance period. A violation of Monitoring and Reporting Program No. 95-068 is a violation of these waste discharge requirements.

4. The Discharger shall maintain legible records of the volume and type of each waste discharged at each WMU and the manner and location of the discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Regional Board.

5. The Discharger shall provide proof to the Board **within sixty days after completing final closure** that the deed to the landfill facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that: (a) the parcel has been used as a municipal solid waste landfill (MSWLF); (b) land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the landfill; and (c) in the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

6. The post-closure maintenance period shall continue until the Board determines that remaining wastes in all WMUs will not threaten water quality.

7. The Board will review this Order periodically and may revise requirements when necessary.

E. REPORTING REQUIREMENTS

1. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program Order No. 95-068 and in the Standard Provisions and Reporting Requirements.

2. The Discharger shall submit a closure and post-closure maintenance plan (or submit suitable modifications to a pre-existing plan), that complies with 40 CFR 258.60 and 258.61, with Article 8 of Chapter 15 and with Title 14 of the CCR.

3. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for construction or operation of the WMUs. The Discharger shall also notify the Board of a material change in the character, location or volume of the waste discharge and of any proposed expansions or closure plans. This notification shall be given 90 days prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these WDRs.

4. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board.

5. The Discharger shall submit a status report regarding the financial assurances for corrective action and closure every five years after the date of adoption of these requirements that either validates the ongoing viability of the financial instrument or proposes and substantiates any needed changes.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 24 March 1995.

William H. Crooks

WILLIAM H. CROOKS, Executive Officer

Attachments

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